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PATENTS DEPT

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Claims

1. A process for producing a porous polymeric membrane which process comprises:

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a) preparing a solution comprising a polymer which comprises vinylidene fluoride in a solvent/non-solvent mixture by dispersing the polymer in the non-solvent prior to addition of the solvent wherein the boiling point of the non-solvent is higher than that of the solvent;

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b) holding the solution at an elevated temperature of at least 40°C until the polymer is completely solvated;

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c) casting the solution to form a thin layer; and

d) drying the thin layer to form a membrane.

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2. Process according to claim 1 wherein the solution comprises polyvinylidene fluoride (PVdF).

3. Process according to claim 1 or 2 wherein the solvent is N,N-dimethylformamide (DMF), N,N-dimethylacetamide (DMA) or N-methyl-2-pyrrolidone (NMP).

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4. Process according to any of the preceding claims wherein the non-solvent is octanol, decanol, dodecanol or a mixture thereof.

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5. Process according to any of the preceding claims wherein the solution is solvated for up to 14 days.

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6. Process according to any of the preceding claims wherein mono-unsaturated carboxylic, sulphonic or phosphonic acid, ester or amide groups are grafted onto the vinylidene fluoride.

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7. A membrane produced by the process according to any of the preceding claims.

8. A laminate comprising a membrane produced according to the process of any of claims 1 to 6.

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9. Use of a membrane produced according to the process of any of claims 1 to 5 or a membrane according to any of claims 7 to 9 in a battery.

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10. Use of a membrane produced according to the process of any of claims 1 to 6 in a fuel cell.

11. Use of a laminate according to claim 8 in a fuel cell.

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AMENDED SHEET